

# ARL is an Authority on Nutrition and the Science of Balancing Body Chemistry Through Hair Tissue Mineral Analysis!

Hair Tissue Mineral Analysis

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## Diabetes

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#### Diabetes

Diabetes is a chronic condition that affects some millions of Americans. According to the Centers for Disease Control and Prevention (CDC) that provides updated statistics about diabetes in the United States reports that a total of 30.3 million people have diabetes (9.4% of the US population); diagnosed: 23.1 million people, undiagnosed: 7.2 million people (23.8% of people with diabetes are undiagnosed). In addition, 84.1 million adults aged 18 years or older have prediabetes (33.9% of the adult US population) 65 years or older: 23.1 million adults aged 65 years or older have prediabetes.

There are different types of diabetes, depending upon the age of onset and other factors. The most common type occurs in adults. Diabetes is increasing in the populations of most developed nations. There is a connection between refined carbohydrate consumption, obesity and stress as causes of adult onset diabetes.

### An Insulin Deficiency?

Diabetes is not simply a deficiency of insulin. If that were so, replacing the insulin would be the answer. However, diabetics on insulin still experience numerous effects of their illness such as neuropathy, atherosclerosis, kidney damage, blindness and other complications.

Nutritional research reveals many interesting aspects of diabetes and offers new ways to prevent and alleviate this condition. The basic approach of nutrition is to restore the pathway by which the body transports and processes glucose.

#### Causes Of Diabetes

Stress and deficient diets lead to many biochemical abnormalities in the energy pathway. The energy pathway is the means by which the body converts sugars from the diet to ATP (adenosine triphosphate). ATP is the fuel molecule used by the body cells. Many nutrients are involved in the energy pathway. It is very complex. Here is a brief summary:

- Cortisol and cortisone secreted by the adrenal glands convert stored fuel to glucose, raising blood glucose levels.
- Manganese, zinc, vitamin C, vitamin A and pantothenic acid are all essential for adrenal gland activity.
- Excessive tissue calcium and magnesium interfere with transport of nutrients and hormones into the body cells.
- **Zinc** is needed to make insulin, to secrete insulin and to extend the action of insulin. Insulin is the substance that transports glucose from the blood into the cells.
- *Chromium* helps the insulin molecule attach to the cell walls to transport glucose into the cells.
- Manganese, magnesium, iron, copper and a variety of B vitamins are needed to convert glucose to ATP.
- Vitamin E protects delicate enzymes from oxidant damage.
- Thyroid hormone acts as the spark to help utilize glucose within the cells
- *Potassium* sensitizes the tissues to thyroid hormone.
- Manganese and iodine are needed for thyroid activity.

## Toxic Metals

Sugar and carbohydrate intolerance can occur due to blockages at any step in the energy pathway. Besides nutrient deficiencies, poisons such as fluoride, chlorine, pesticides and many others can inhibit enzymes needed to convert glucose to ATP.

Toxic metals may also interfere with glucose utilization. For example, cadmium interferes with zinc. Copper toxicity may interfere with zinc and manganese. Iron toxicity interferes with chromium utilization.

There is a familial or hereditary pattern to diabetes. However, careful living and eating habits can often overcome the tendency to diabetes. Poor eating habits and excessive stress can create a trend for diabetes even when the hereditary tendency is not present.

## Hair Analysis Indicators Of Diabetes

Dr. Paul Eck found that certain hair mineral ratios are associated with an increased tendency for diabetes. The main indicators are a low sodium/potassium ratio and/or a low or high calcium/magnesium ratio. Low zinc, manganese, potassium or chromium also indicate a tendency for carbohydrate intolerance.

**These are trends only**. It may take years for a trend to develop into illness. Also, in some individuals the trend may be masked by other factors so that it is not revealed on the first hair analysis.

## Control Of Diabetes

The standard medical approach to diabetes is the use of insulin shots or sugar-lowering drugs. Both these methods have side effects and do not prevent some of the complications of diabetes. While they may be needed in some cases, natural approaches can be a helpful and safe addition to any program to control diabetes.

Adult onset diabetes responds the best to nutritional methods. Diet plays an important role in the control and correction of diabetes. While there is individual variation, many individuals improve on a low-carbohydrate diet. This may not be in agreement with the recommendations of many physicians.

Fast oxidizers, in particular, do not handle carbohydrate foods very well. Careful attention to diet and its effect upon blood sugar is of critical importance.

Stress plays a large role in diabetes. Sugar levels often rise under stress due to excess adrenal activity. Controlling stress by any means will help all diabetics. Lifestyle is important. Relaxation, meditation, massage or other natural therapies may all be helpful.

Obesity is a factor in many cases of adult onset diabetes. Diet is the most common cause of obesity, but other factors may be responsible as well.

## Supplementation

Nutritional supplements can be of great benefit to both prevent and correct diabetic tendencies on a hair analysis. Random supplementation is not as beneficial as a scientifically designed program that takes into account the oxidation type, toxic metals and trace element deficiencies.

In addition to the recommended nutrient program, the dosages of chromium, manganese and zinc can usually be doubled for those with diabetes. Pancreas glandular and herbs may also be helpful for some diabetics.

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